

Title (en)

Three wavelength light emitting diode

Title (de)

Leuchtdiode mit drei Wellenlängen

Title (fr)

Diode électroluminescente à trois longueurs d'onde

Publication

EP 1850383 A1 20071031 (EN)

Application

EP 06008505 A 20060425

Priority

EP 06008505 A 20060425

Abstract (en)

A three wavelength light emitting diode (LED) structure utilizes a blue light LED chip and a green light LED chip as light sources, and a red fluorescent layer is used as a light transition layer. By adjusting the operation current of the blue light LED chip and the green light LED chip and the dosage of the chemical substances in the red fluorescent layer, the present invention can produce a white light LED which is adjustable in color temperature, a neutral color LED whose color is changeable, or can produce a LED whose light color changes with time.

IPC 8 full level

H01L 25/075 (2006.01); **H01L 33/50** (2010.01)

CPC (source: EP)

H01L 25/0753 (2013.01); **H01L 33/50** (2013.01); **H01L 2224/48091** (2013.01); **H01L 2224/48247** (2013.01); **H01L 2224/49113** (2013.01); **H01L 2224/8592** (2013.01); **H01L 2924/181** (2013.01)

Citation (search report)

- [X] US 2003227022 A1 20031211 - HWANG CHIN-MAU JAMES [TW], et al
- [X] WO 2005109532 A1 20051117 - SEOUL OPTO DEVICE CO LTD [KR], et al
- [X] WO 2005112137 A1 20051124 - SEOUL OPTO DEVICE CO LTD [KR], et al
- [X] US 2004207313 A1 20041021 - OMOTO MASATOSHI [JP], et al
- [X] US 2005117334 A1 20050602 - LEE KUN-CHUI [TW], et al
- [X] DE 10233050 A1 20040205 - OSRAM OPTO SEMICONDUCTORS GMBH [DE]
- [X] DE 102005020695 A1 20051215 - OPTOTRANSMITTER UMWELTSCHUTZ T [DE]
- [A] EP 1160883 A2 20011205 - MATSUSHITA ELECTRIC IND CO LTD [JP]
- [A] WO 2004100275 A1 20041118 - CREE INC [US]

Cited by

WO2009157999A1; JP2019114637A

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR MK YU

DOCDB simple family (publication)

EP 1850383 A1 20071031

DOCDB simple family (application)

EP 06008505 A 20060425